

International Space Station Increment 5/First and Second Utilization Flights (UF-1 & UF-2) Payload Operations Director

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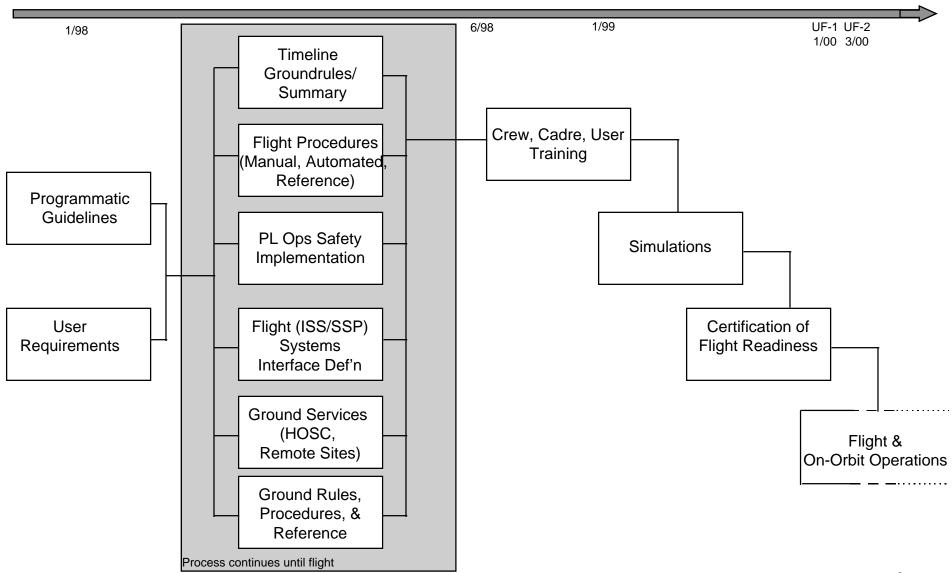
Pre-Flight Responsibilities

Users/Payload Developers/ Space Station Control Center **Payload Operations Principal Investigators Integration Team** (SSCC) Flight Director -Ensure ready to support UF-1-Payload requirements ISS systems interfaces Generic documentation/processes/ & systems Flight & Ground Procedures Mission Planning **Mission Control Center -**Ground network/facilities interfaces **Houston (MCC-H)** ISS/SSP systems interfaces Safety compatibility **Flight Director** Crew /ground personnel training SSP requirements and interfaces **Payload Operations Director Mission Control Center-Payload Mission Integrator** Moscow (MCC-M) (ISSPO PMI) **Flight Director** Programmatic direction Certification of Flight Readiness Payload point of commitment Launch Package Manager **Increment Manager (IM)** (LPM) All increment requirements and SSP requirements integration execution

Lead Payload Operations Integration team to develop operational planning and integration based on individual payload requirements and ISS capabilities/constraints



Operations Integration Overall Process





Flight Responsibilities

Users/Payload Developers/ Principal Investigators

Operate their own payload/science
Payload operations support
& change requests
Resolve payload issues

POIC Flight Controllers

Provide overall authority & responsibility for station-wide payload safety, payload planning and plan execution, payload operations, & payload anomaly troubleshooting

Payload Mission Integrator (ISSPO PMI)

Programmatic direction

Space Station Control Center (SSCC) Flight Director

Space Station interfaces

PAYLOAD OPERATIONS DIRECTOR

Payload Point of commitment
Ensures that payload operations
are conducted in accordance
with the Flight Rules, and
integrated plans and procedures

Payload Operations Integration

Real-time operations results & feedback into future planning (Continuous Operations)

Mission Control Center-Houston (MMC-H) Flight Director

Space Shuttle interfaces

Mission Control Center-Moscow (MCC-M) Flight Director

TBD

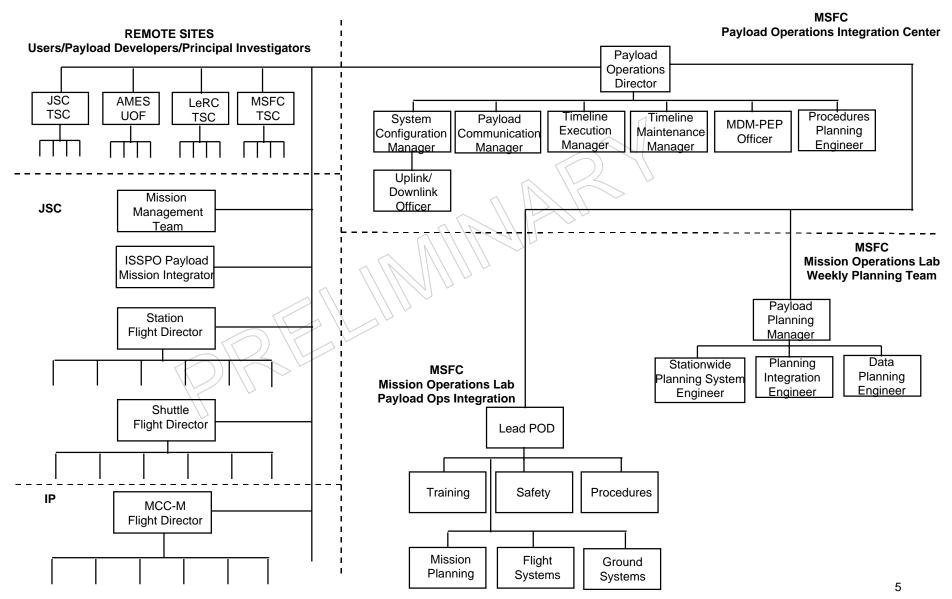
Mission Management Team

Management direction when mission circumstances develop which are outside the resolution authority of the Flight Director

Lead POIC flight controllers in the execution of UF-1 integrated payload operations to realize science objectives for Payload Developer/Principal Investigators



UF-1/2 Realtime Interfaces





Payload Operations Integration UF-1 Preparation

- Setting precedences for future Space Station Payload Operations
- Establishing working relationships with Space Station Payload Program Office
 - Assisted PMI in developing the PMI Team charter
 - Will be documented in Station Program Implementation Plan (SPIP), Vol. 1
 - Review of UF-1 Mission Integration Plan
 - Space Station to Space Shuttle Interface/Integration Agreements
 - Review of UF-1 Payload Integration Agreement Blank Book
 - Space Station to Payload Interface/Integration Agreements
- Interfacing with Payload Developers/Principal Investigators, gathering operations requirements
 - Launch Package Manager Technical Interface Meeting, April 7-9



Future Work

- Complete operations capability development
 - Details of user interfaces and processes
 - Ensuring we know where all requirements are documented
 - Ensuring processes in place for start of UF-1 payload operations integration
- Program Office and JSC Mission Operations Directorate interfaces
 - Develop operations procedures with interfaces
- Begin Payload Operations Integration for Increment 5 (UF1/2) (Jan. 99)